

SM

Judge Harry D. Leinenweber
Magistrate Judge Sheila M. Finnegan
RANDOM

MAHMOOD SHAREEF, Plaintiff \$ UNITED STATES DISTRICT COURT FOR THE
Vs \$ NORTHERN DISTRICT OF ILLINOIS
BOEING DIRECTORS & CEO, Defendants \$ 219 SOUTH DEARBORN STREET
CORPORATE OFFICE, CHICAGO, ILLINOIS \$ CHICAGO, ILLINOIS 60604

FILED

MAY 20 2022

THOMAS G. BRUTON
CLERK U.S. DISTRICT COURT**BOEING COMPOSITE ILLEGAL AIRCRAFTS**

I) Plaintiff Mahmood Shareef brings this legal case against the Boeing Directors and CEO defendants. The defendants have built composite aircraft illegally. Nobody in the whole world has built composite plies (0.1 inch thick) aircraft. The defendants have not studied composite failure theory. The composite failure theory says, first composite ply failure leads to laminate (orthotropic layers) failure and eventually the whole aircraft failure. It is as iff building a concrete bridge using only concrete without steel cables. The composite one first ply failure is enough to declare all Boeing composite aircrafts are illegally manufactured and they all must be grounded first to save travelers lives, and legal action must be taken against defendants by court. The defendants building of aircraft with stack of very thin composite plies, this will be first reason to ground all Boeing composite aircrafts.

II) The composite material is anisotropic having different properties in all directions, whereas isotropic aluminum having same properties in all directions. When aluminum aircraft is pressurized and depressurized the cabin at landing comes back to original position, but the composite aircraft does not come back to original position and leaves Residual Stress in the whole composite aircraft, and residual stress is added for each flight. The defendants composite aircraft ignored residual stress which is very serious to ignore. Residual stress failed Space Shuttle. The ignoring residual stress can fail aircraft, this is second reason for all Boeing composite aircrafts be grounded.

III) The most critical problem of defendants composite aircraft is using stack of thin plies and resin to build the aircraft. The defendants aircraft during pressurization and depressurization composite plies are braking and some times plies need repairing. FAA has approved and gave unprecedented defendants power to repair broken plies during flight and fly aircraft without checking. The defendants are illegally repairing broken plies, but broken plies can never be repaired. The only thing defendants can do is covering up the broken plies, this will increase weight. FAA is not checking the number of broken plies and never knew how many are broken in each aircraft. The

defendants are not keeping any record of broken plies and their locations. The defendants have created a problem that cannot be solved. This broken plies problem is third reason to ground all Boeing composite aircrafts.

IV) One of the most critical problem of composite material is delamination of composite plies and resin, and it is highest in two aircraft wings where the engines are attached. The aircraft engines create rough motions and sound responsible for delamination. The defendants knowingly kept quite at the disappearance of Boeing 777-2H6ER, Kuala Lumpur tragedy, the truth is the defendants are responsible for all Boeing aircraft disappearances including Boeing 777-2H6ER due to delamination. The defendants are responsible for the death of thousand people. The Air Safety Regulation staff saw the aircraft disappearance and this must be investigated by FAA and other responsible. The disappearances of aircrafts will be fourth reason to ground all Boeing composite aircrafts to save lives.

V) The biggest advantage defendants getting are FAA administrator Steve Dickson, who blindly approving all defendants aircrafts. FAA has approved and gave unprecedented defendant power to repair broken composite plies during flight and fly aircraft without checking. FAA never checking as to how many plies are broken in the aircraft and where they are located. FAA and defendants never studied composite failure theory applications. FAA has irresponsibly and illegally approved repairing new composite aircrafts and approved Repair Manual. Composite aircraft illegal repair and repair manual, will be fifth reason to ground all Boeing composite aircrafts.

VI) The defendants never realized that the whole composite aircrafts are flying on composite plies fuselage where passengers are sitting, and during aircraft landing it is dangerous. When hard landing happens it can kill all people. FAA has approved and gave unprecedented power to defendants to repair broken composite plies during flight and fly aircraft without checking. The defendants are illegally repairing broken plies, but broken plies can never be repaired. The only thing defendants can do is covering up the broken plies, this will increase weight. FAA is not checking the number of broken plies and never know how many are broken in each aircraft. Basically defendants are completely unknown about the safety of aircraft. Passengers are taking huge risk by flying Boeing composite aircrafts. This will be sixth reason to ground all Boeing composite aircrafts to save lives.

VII) The defendants are not caring how the composite aircrafts are working after ten years when some aircrafts have failed. The defendants are losing composite aircrafts like Malaysia 777s airline failed at twelve yr life=5.5 Life=12Year, 7525 Flight, Full Life=135,000Flights(Boeing747), 7525flights x100/135000Boeing747life=5.5% Defendants not realizing that composite aircrafts life is only 5.5%, and Boeing aircrafts will never reach 100%. The life of Boeing composite aircrafts are low 5.5%, this is seventh reason for all Boeing aircrafts be grounded.

VIII) Defendants are releasing Boeing 777X the latest series of the long-range, wide-body, twin-engines plane. This is the same aircraft that Failed Before Chance To Repair, which defendants never thinks as possible. Google news reported Boeing composite 777X aircraft fuselage split dramatically during testing. This will be biggest and largest illegal aircraft Being built and released with composite plies fuselage, new GE9X engines, and composite plies wings with folding wingtips, greater cabin width, costing \$442 and carrying 500 passengers. This biggest aircraft is being built with 0.1 inch thick composite plies glued with resin to form the part of aircraft and the thin composite plies are stacked in many plies. The whole aircraft with thin plies are cured to form the most rigid aircraft. When the most rigid aircraft cabin is pressurized many thin plies will break because of non flexibility. Defendants built so huge illegal aircraft, and it is eighth reason for all Boeing composite aircrafts to be grounded. The defendants are responsible to create composite fuselage in thin plies where passengers are sitting. How defendants can imagine this most serious thing, and Boeing is building largest aircraft carrying 500 travellers and they are going to sit on composite plies. The defendants should know what happens when the plies aircraft landing, and defendants should imagine when landing is hard and over weight, all passenger sitting on plies will be dead. The defendants should know that all composite aircrafts are twelve years old now and all fuselages (plies) are damaged (broken plies, residual stress, delamination), but defendants still want to make biggest plies aircraft. The defendants now must realize plies composit aircraft is illegal and must be stopped by grounding all aircrafts.

BOEING 737 MAX AIRCRAFT

IX) Boeing 737 was the best narrow body aircrat and was sold in thousands. The defendants in competition with Airbus and in hurry manufactured 300 Boeing 737 MAX aircrafts without testing, and this is the biggest problem. The defendants Boeing 737 MAX has done many changes to the Boeing 737. The changes are, wide body, added length, big tail cone, winglet design, and most impartent change of bigger size CFM International LEAP-1B engine. The defendants Boeing 737 MAX became completely a new aircraft. Any new aircraft requires lots of complete analyses of the aircraft before service. The new aircraft requires dynamics of aerospace systems, control of aerospace system, aerodynamics, thermodynamics, flight software systems, aerospace structures. The defendants has to do all above systems analyses for each new aircraft. The defendants are behaving like a layman and wants to build so many aircrafts such as Boeing 737 MAX, Boeing 737-8, Boeing 737-9, Boeing 737-10, and Boeing 737-800, using computer tricknick. The defendants Boeing 737 MAX had so many accidents,

and the latest Boeing 737-800 China accident, are based on computer tricknick. Nobody in the world has used computer tricknick to manufacture or control aircraft, and it is one hundred percent illegal. The FAA admenistrator Steve Dickson is responsible to illegally approve computer tricknick. FAA never checked any Boeing 737 MAX. The defendants are responsible for the two aircrafts passingers deaths including expert pilots. The Boeing 737 MAX and 737-800 are currently operating after FAA approved computer tricknicks. The FAA approval and defendants flying 737 MAX are criminal, and it is nineth reason for all Boeing 737 MAX aircrafts be grounded.

M.SHAREEF US PATENT COMPOSITE AIRCRAFT

X) The plaintiff US patent approved composite aircraft would have saved thousands of lives, because plaintiff followed fundamental composite failure theory, composite does not carry any load and all loads are carried by thin metallic cables. The plaintiff composite aircraft can never touch any composite ply, because composite only holds metallic cables just like in bridge concrete holds metallic cable. The plaintiff composite aircraft can fly for thousands of flights no problem. The plaintiff composite aircraft was US approved in June 2018 but so far no buyer or licenser. Boeing played a dirty game of telling all companies not to buy my US patented aircraftt. Not only that Boeing told recruiters not to get job to plaintiff. The plaintiff was surprised that in America this can happen. The plaintiff is without any job since 2015. The Plaintiff won proposal for Star Wars Missile Defense System, and perfected analysis upto production of Patriot Missile which is making millions to America even now but America made me pinniless. After making President Reagan and Gorbochav having proven preformance in the hall, Boeing laid me off and told all big companies not to give work. The plaintiff Who's Who in America did many inventive works, Boeing Space Station, Boeing 777 GE200 having composite fan-blades solved by plaintiff. But Boeing took away my Butler Co. job in 2015 and told not to give job samall company also. Right now nobody is caring including America and even plaintiff did not get unemployment money, sold every thing and Plaitntiff hope this time defendants will not kill any more and plaintiff will build best composite aircraft for all. Tha plaintiff has lofs of experience and did lots of works for Boeing but what Boeing is doing currently is not good. The plaintiff is of opinion defendants should accept illegal work and giveup composite plies because defendants cannot go against engineering which is perfect scince. The plaintiff is of opinion to defendants that defandabts should give up at this stage otherwise it will be worst if try to go further. The defendants should look to the plaintiff position how he has lost everything but plaintiff feels that better future will come hopefully the result of this lawsuit. The plaintiff

dreem is to build perfect composite aircrafts and forget everything.

US District Court Judge Bruton, please take immediate action to stop killings, and ground all Boeing composite aircrafts until US District Court Judge Bruton takes the final action on all Boeing composite illegal aircrafts.

US District Court Judge Bruton, please take immediate action to stop killings, and ground all Boeing 737 MAX aircrafts until US District Court Judge Bruton takes the final action on all Boeing 737 MAX aircrafts series.

Plaintiff Name and Address:

Date: May 17, 2022

Mahmood Shareef

9745 Burwell Drive, Fort Worth, Texas 76244

A handwritten signature in black ink, appearing to read 'M Shareef', with a long horizontal stroke extending to the right.

Mahmood Shareef, Plaintiff Signaturre

STAR WARS
PATRIOT MISSILE

STS87-0518

KKV FLY-ALONE STRUCTURAL MODEL

OCTOBER 1987

Contract F04701-87-G-0066
CDRL 046A3

Approved by: Peroez Obaid
P. Obaid
Structures Analysis

Prepared by: M. Shareef

1:22-cv-02683
Judge Harry D. Leinenweber
Magistrate Judge Sheila M. Finnegan
RANDOM



Rockwell International

Space Transportation
Systems Division

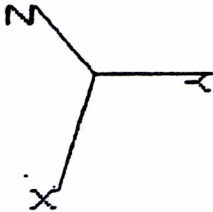


Rockwell International

Space Transportation
Systems Division

INTEGRATED VEHICLE MODEL FIG 2.1

NODES SHOWN



NODES SHOWN

INTERFACE? 1. NEUTRAL 2. NASTRAN 3. ANSYS 4. STARDYNE 5. IGES 6. END

STAR WARS
MISSILE DEFENSE SYSTEM
"PATRIOT MISSILE"

SPACE SHUTTLE

Internal Letter



Rockwell International

Date: . March 16, 1984

No: . 385-121-84-033

TO: (Name, Organization, Internal Address)

. D. J. Trent
 . Shuttle Orbiter Division
 . D/385, 041-1, AD38-Downey

FROM: (Name, Organization, Internal Address, Phone)

. M. Shareef
 . Shuttle Orbiter Division
 . D/385, 041-1, AD38-Downey
 . 2-2257

Subject: . ESO Solar Array Finite Element Analysis

Reference: Extended Duration Orbiter - Solar Array Panel:
 Finite Element Model for Dynamic Analysis,
 AE-JGS-83-273, October 28, 1983;
 M. Shareef

A finite element model was developed for the Two-Wing Rockwell Solar Array System. The mode shapes and fundamental frequencies of the Two-Wing Solar Array System have been studied. A dynamic response analysis, due to plume impingement pressures coming from VRCS of the Orbiter, was also performed on this model. A Single Wing Solar Array was studied in the last report (Reference). The data presented in this report completes the activities of the S/A 22902 task under the ESO Solar Array Analysis.

M. Shareef
 Integrated Vehicle & Structure Design
 Advanced Design
 Advanced Engineering

MS/rar

cc:(2)J. G. Stephenson

D. Hays

(1)A. O. Morrison

(1)K. H. Hsiao

(1)T. H. Nathanson

(2)O. Harwood

(2)C. Kuo

(2)C. Richie

(1)K. L. Tong

(1)J. M. Kellam

(1)W. H. Blanchard

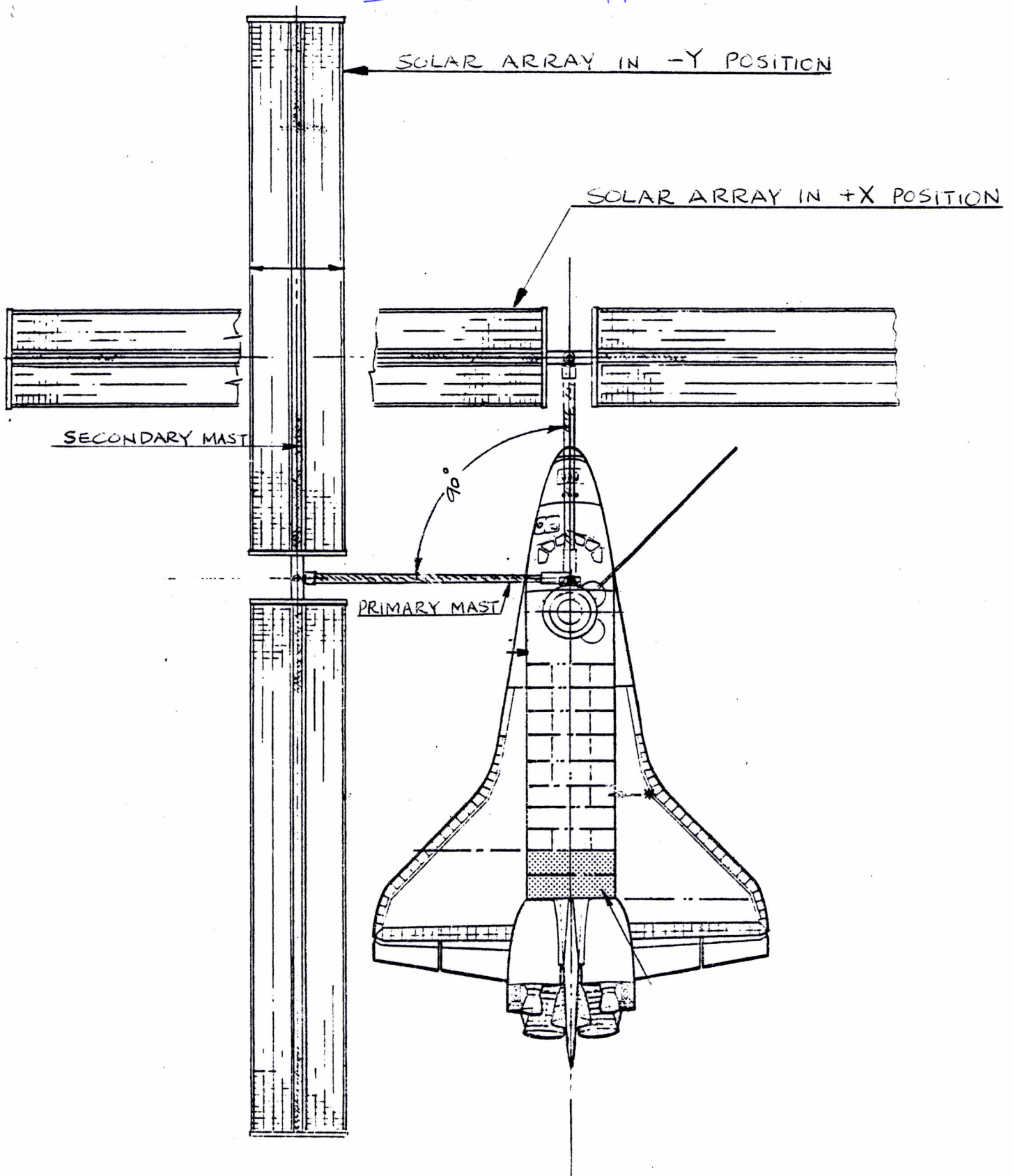
(1)B. Davidson

D/385, AD38
 D/385-300, AE09
 D/385-500, AC59
 D/385, AD38
 D/385, AD38
 D/385, AD38
 D/280-304, AB97
 D/385, AD38
 D/385-112, AA96
 D/385-112, AA96
 D/385-300, AE09
 D/385-121, AD38

(1) - without Appendices

(2) - without Enclosures

SPACE SHUTTLE



EXPANDED SPACE OPERATIONS - ROCKWELL SOLAR ARRAY SYSTEM

President Barak Obama ,

April 17, 2011

White House, Washington , D.C.

Dear Mr. President,

I am writing this letter based on The New York Times article " Obama Calls for End to NASA's Moon Program." I worked as Lead Engineer at Rockwell International Corporation (now Boeing Aircraft) For 15 years. I fully agree with the decision made by you to scrap the NASA Constellation's Ares I rocket and Orion Crew Capsule. This NASA's New Shuttle, which looks a bigger version of the old Gemini Capsule, is like going backward instead of progress.

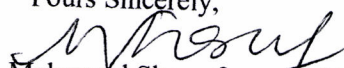
I have a very practical and perhaps most economical idea to save the beautiful existing Shuttle and use it for future operations. The present space Shuttle Delta design has been tested for all these years whereas any new design including the Orion Crew Capsule has to be tested in hypersonic flight conditions. A Delta design is more stable in flight from Hypersonic to Subsonic speeds for a reentering Space Vehicle throughout a wide range of nose-high attitudes. Also a Space Vehicle needs wide cross range using the lifting properties of a reentering Space Vehicle which was an Air Force requirement for the Shuttle.

I think the final decision to build a Space Shuttle was done in a hurry because of a fight between the NASA and OMB at that time. In doing so they ignored a fundamental engineering principle of Elastic design. The Shuttle body is built with Aluminum material and thermal Tiles are made of Silica. The thermal Tiles are Glued not attached to the Shuttle body through a flexible material Strain Isolation Pad(SIP). The elastic Stress-Strain theory is based on applied stress creating strain and the material comes back to the original condition when stress is removed. But in the case of SIP which behaves as plastic, the Strain is not removed and the material does not go back to the original shape creating a residual stress in the Stress Isolation Pad and the Thermal Tile. For each Shuttle flight the SIP gets additional residual stress thereby the accumulated residual stress makes the Tile lose its contact with Aluminum body. The Tile is dislodged from its position and then the huge outside temperature (over 3000deg F) melts the Aluminum body (over 600deg F) and hence the Shuttle failure disaster will happen. Both Space Shuttles Challenger and Columbia failed primarily because of this mismatch plus weather conditions.

I have done some critical pioneering work on Space Shuttle and Space Station. I performed an inventive finite element analysis method for the Solar Wings for Space Shuttle to stay longer in space by generating solar energy & Space Station to generate electric power from solar energy . I was Focal engineer from winning proposal to production of Missile Defense System (Star Wars) program. I was listed in "Who's Who in America".

I was working on Direct Thermal Tile Bond System that will eliminate this fundamental mistake of ignoring Elastic design and it will have no more Residual Stress problem. This Direct Bond System will eliminate Strain Isolation Pad (ISP) between Aluminum body and Tiles. I am fully confident that it is very feasible and I think we can save our Space Shuttle and Space program. A meeting with NASA engineers I will explain more clearly how this existing Shuttle can be transformed into a stable Shuttle that can give many more years of service. I also have an idea for a New Shuttle which looks like the existing Shuttle but without this huge Hydrogen/Oxygen tank and Shuttle engines. Mr. President you are spending \$1.1 Billion dollars to build the same cancelled Shuttle Crew Module for Emergency Rescue of Space Station astronauts. But Mr. President once you start this program (ending in 2014) the future administration may back this lame program. Moreover there is no need to spend \$1.1 Billion dollars, we can use one of the retired Space Shuttle to fly to Space Station and stay parked there for emergency rescue operations for the Space Station astronauts. The saved money can be used for new programs.

Yours Sincerely,


Mahmood Shareef

EMAIL: mahmood.shareef786@gmail.com PHONE: (678) 361-5251

INVENTIVE WORK EXPERIENCE

- THE B-1 BOMBER IS FLYING BECAUSE OF MY COMPUTER PROGRAM TO CREATE INFLUENCE COEFFICIENTS FOR THE SWING WING B-1 BOMBER AIRCRAFT CREATING LOADS FOR EACH WING SWEEP ANGLE. THE COMPANY SAVED BILLIONS ON MY WORK.
- THE SPACE SHUTTLE IS FLYING WITH MY NON-LINEAR ANALYSIS OF THREE MAIN ENGINE HEAT SHIELDS MODIFIED WITH INCONEL 625. THE SPACE SHUTTLE SAVED WEIGHT, MADE MILLIONS.
- THE SPACE SHUTTLE IS STAYING LONGER IN SPACE BECAUSE OF MY SOLAR WING ANSYS FINITE ELEMENT ANALYSIS USING A CLOTH ELEMENT (Developed with the help of ANSYS'S Dr. Johnson).
- THE SPACE STATION IS USING MY SOLAR WINGS ANALYSIS TO CREATE ELECTRICITY. BOEING USED MY ABOVE PATENT TO WIN THE BILLION DOLLAR CONTRACT FOR SPACE STATION ELECTRIFICATION. BOEING MADE BILLIONS ON THIS PROGRAM.
- FIRST INTERCEPTOR MISSILE DEFENSE SYSTEM KNOWN AS STAR WARS WAS FEM MODELED, ANALYZED BY ME. I WAS THE PROJECT MANAGER FROM PROPOSAL TO TEST PRODUCTION. THE GROUND BASED MISSILE DEFENSE SYSTEM NOW CALLED "PATRIOT MISSILE" AMERICA IS MAKING BILLIONS ON MY WORK.
- THE BOEING 777 GE-200LR ENGINE HAS COMPOSITE FAN BLADES. FAA WANTED COMPLETE FAN BLADE-OUT ANALYSIS PROOF, I DID THE COMPLETE FAN BLADE-OUT ANALYSIS AND PROVED THAT PLANE CAN FLY WITH ONE ENGINE FOR 5.5 HOURS. FAA APPROVD
- WORKED ON F-18 E&F, F-22, BOEING 777, JSF F-35 (STOVL) JUCASS, GULFSTREAM G-IVX Thrust Reverser, BELL Helicopter.

WAS LISTED IN "WHO'S WHO IN AMERICA"

Bachelor's Degree in Mathematics, Osmania University, India.

Bachelor's Degree in Civil Engineering, Osmania University, India.

Master's Bridge Engineering, University of Surrey, England.

PRACTICAL EXAMPLE OF COMPOSITE FUSELAGE

PRACTICAL EXAMPLE OF FUSELAGE USING PATENT:

The best solution is to introduce Prestressed metallic cable inside the composite material and apply cable tension required to support the load. Thus, the load will be carried by the metallic cable and not by composite structure which will supports the metallic cable. Using the methodology of patented method, there will be no residual stress in the composite structure, providing safety to structure. The following is a practical example of Aircraft Fuselage using approved Patented method.

1

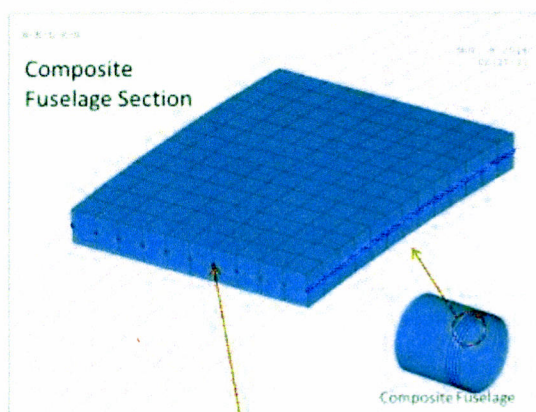
An ANSYS FEM Model

A Sample Fuselage Problem:

Fuselage radius = 216 in
Composite thicknes = 1.35 in
Composite material = Carbon

Cable Diameter = 0.18 in
Cable cross section Area = 0.025
Cable material = Titanium

Internal pressure = 11.5 psi

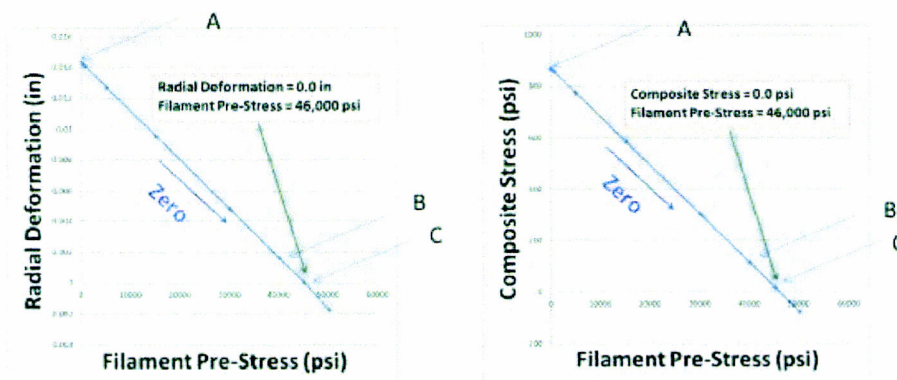


Fuselage reinforced with pre-stressed Titanium Cable Rings

The Cable Rings are embedded within the fuselage and are pre-stressed

M. SHAREEF PATENT AIRCRAFT

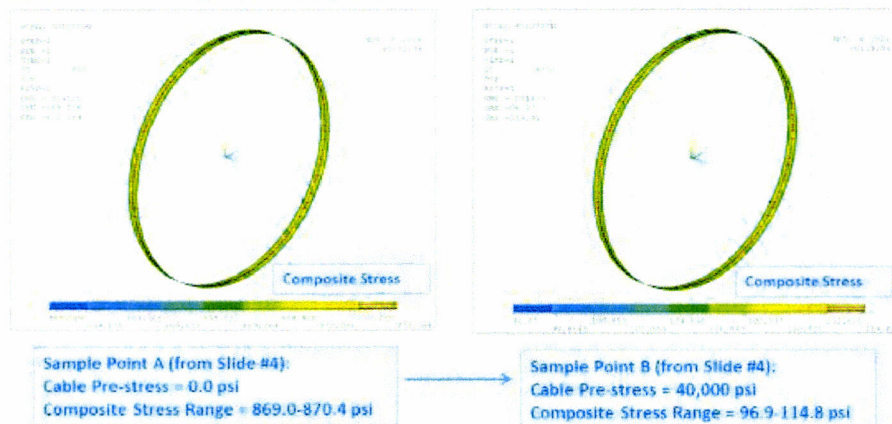
2

A Sample Fuselage Problem ... Contd.

As the Cable (Filament) Pre-Stress is increased, Fuselage Radial Deformations and Composite Stresses are reduced to Zero (Point C):

- No Residual Stresses in the Composite will be Present
- No Cumulative Damages in the Composite will Accrue

3

A Sample Fuselage Problem ... Contd.

As the Cable Pre-Stress is increased from 0.0 psi to 40,000 psi, the Composite Stress is lowered from about 870 psi to about 100 psi. When the Cable Pre-Stress is increased to 46000 psi (see Slide #4, Point C), the Composite Stress reduces to 0.0.

BASICALLY, THE LOAD IS CARRIED BY CABLE, COMPOSITE STRUCTURE HOLDS CABLE USING CABLE COMPOSITE ANISOTROPIC BEHAVIOR TRANSFORMED INTO ISOTROPIC

M.SHAREEF SAVED ASTRONAUGHTS LIFE

*M.SHAREEF WAS INVOLVED FOR THE SPACE SHUTTLE LIFE CALCULATION. HE ESTIMATED THIS WORK BASED ON SPACE SHUTTLE "GOOEY STRAIN ISOLATION PAD (SIP)". THE SIP IS SHUTTLE'S WEEKEST CONNECTION. M.SHAREEF ANALYSE THE SIP, GAVE 35 SHUTTLE FLIGHTS TO BE THE ANSWER. THE TOP MANAGEMENT TRUSTED ME AND NUMBER. ALL READY TO FLY SHUTTLES WERE GROUNDED TO SAVE LIVES.

in Figure 6.11. These peel stresses can cause delamination at the edge. Similar stress distributions will be identified in Chapter 9 for bonded joints and bonded doubler plates.

Interlaminar shear stresses also occur in angle ply laminates as the individual plies distort differently under the applied loads. A more thorough treatment of edge effects is contained in Ref. 1.

6.4 Failure Theories

6.4.1 Overview-Matrix Cracking, First Ply Failure and Ultimate Load

The prediction of failure in laminates is complex. Failure is not only influenced by the type of loading, but also the properties of the fiber and properties of the resin, the stacking sequence of the plies, residual stresses, and environmental degradation. Failure will initiate at a local level in an individual ply or on the interface between plies but ultimate failure in multi-directional laminates may not occur until the failure has propagated to several plies.

Strains in the laminate are constant through the thickness for in-plane loading of symmetric laminates, or vary linearly if the laminates are subject to out-of-plane curvature. However, the stresses in each ply given by equations (6.7) and (6.24) depend on the modulus of the ply and vary discontinuously through the thickness of the laminate. Failure of the laminate described by a mean stress averaged through the thickness of the laminate will therefore apply only to a particular lay-up. The prediction of failure in multi-directional laminates usually requires the determination of strains and stresses for each ply in the material (1, 2, 3) axes for the ply. The prediction of ultimate failure then requires following the progression of failure through the laminate. A number of different types of failure therefore need to be assessed when evaluating the strength of a laminate:

- (1) matrix cracking, which may have important implications for the durability of the laminate;
- (2) first ply failure, where one of the plies in the laminate exceeds its ultimate stress or strain values;
- (3) ultimate failure when the laminate fails; and
- (4) transverse failure or splitting between the layers of the laminate.

Matrix cracking depends on the total state of stress or strain in the matrix. It depends on the residual stress in the matrix due to the curing processes as well as stress and strain due to mechanical loads. For example, in a thermoset laminate cured at elevated temperature, the resin can be considered to cure at or near the glass transition temperature. Because the thermal expansion coefficient of the matrix is much higher than that of the fibers, cooling to room temperature

Date
June 5, 2018

Patent Number
9,987,772

Mahmood Shareef

INVENTOR

SYSTEM AND METHOD TO MANUFACTURE
COMPOSITE STRUCTURES

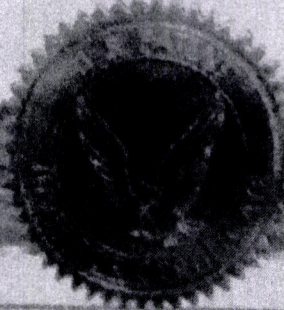
The Director of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

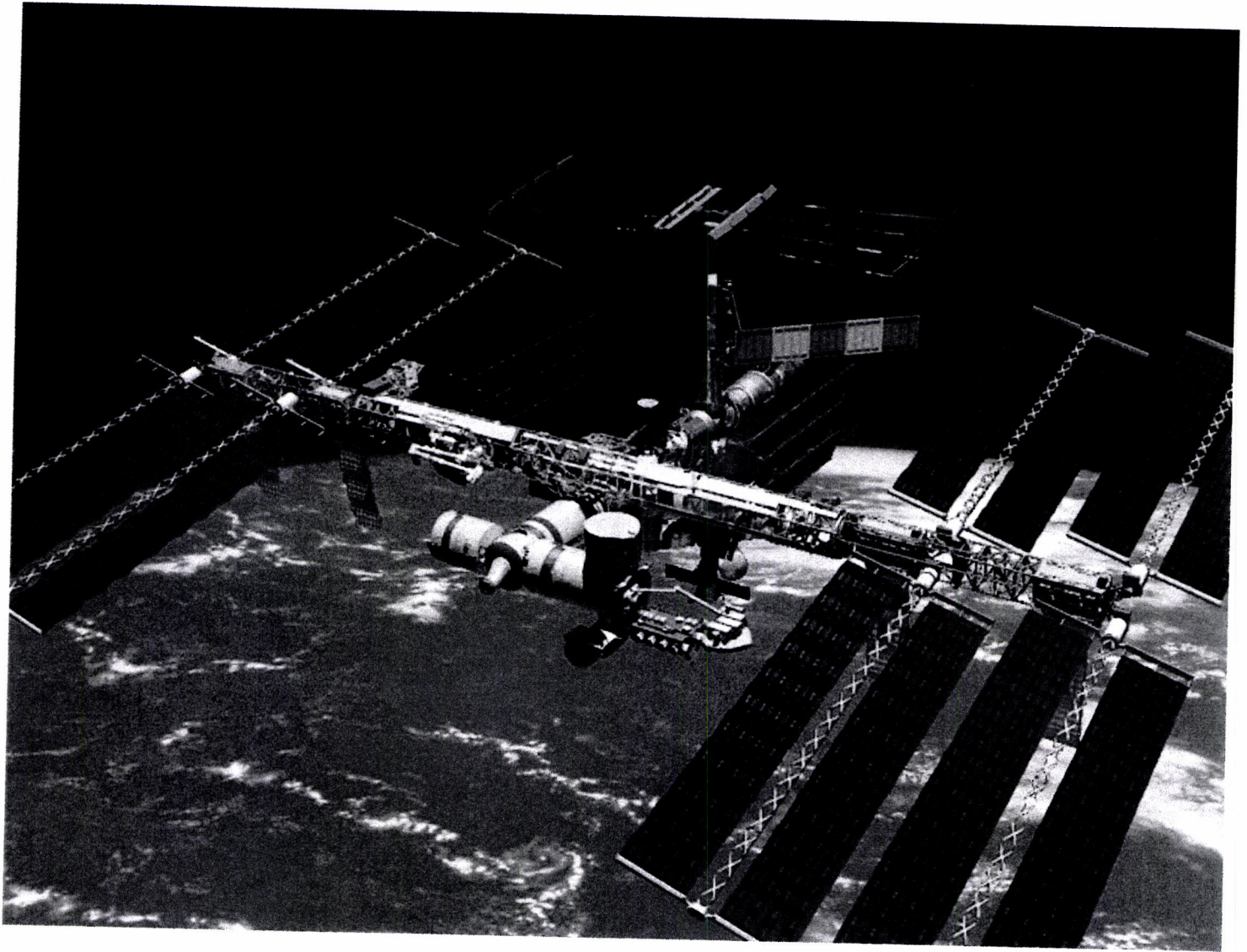
United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term of this patent, subject to the payment of maintenance fees as provided by law.

A. Todd Robinson
Acting Commissioner of Patents and Trademarks

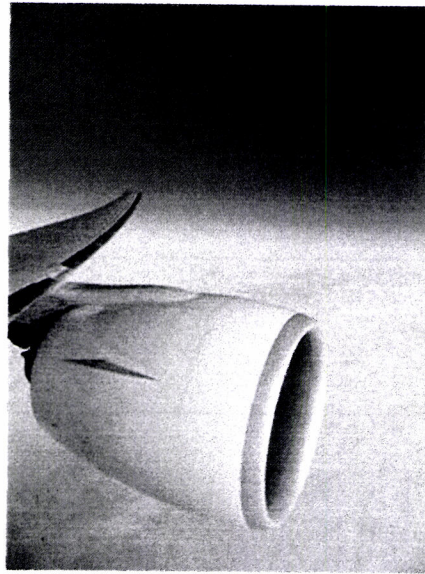


Mahmood Sharref Work - Boeing Space Station



M. Shareef Work For BOEING

Operational history [\[edit\]](#)



A GE90-110B1 mounted on an [Air Canada Boeing 777-200LR](#) in flight over [Siberia](#)

The first General Electric-powered Boeing 777 was delivered to British Airways on November 12, 1995;^[7] the aircraft, with two GE90-77Bs, entered service five days later.^[8] Initial service was affected by [gearbox](#) bearing wear issues, which caused the airline to temporarily withdraw its 777 fleet from [transatlantic](#) service in 1997.^[8] British Airways' aircraft returned to full service later that year,^[9] and General Electric subsequently announced engine upgrades.

Records [\[edit\]](#)

According to the [Guinness Book of Records](#), at 127,900 lbf (569 kN), it holds the record for the highest thrust (though it is rated at 115,300 lbf (513 kN)). This thrust record was accomplished inadvertently as part of a one-hour, triple-red-line engine stress test. In order to accommodate the increase in torsional stresses an entirely new steel alloy (GE1014) had to be created and then machined to extreme tolerances.^[10] The new record was set during testing of a GE90-115B development engine at GE Aviations' Peebles Test Operation, which is an outdoor test complex outside Peebles, Ohio. It eclipsed the engine's previous Guinness world record of 122,965 pounds of thrust.^[11]